

TITLE: P-CHANNEL DYNAMIC FLASH MEMORY CELLS WITH ULTRATHIN TUNNEL OXIDES

INVENTORS NAME: Leonard Forbes SERIAL NO.: 10/042,924

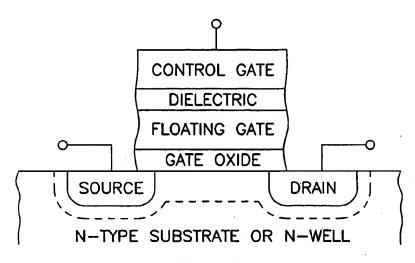


FIG. 1A (PRIOR ART) PMOS

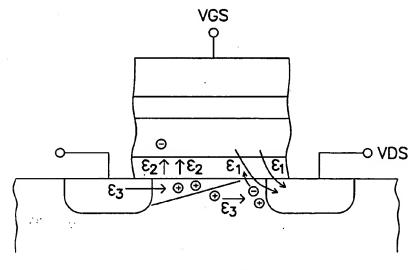


FIG. 1B (PRIOR ART)



SERIAL NO.: 10/042,924

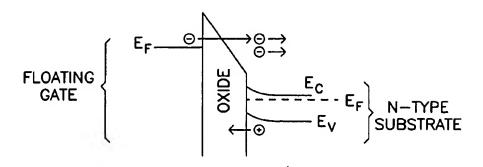


FIG. 2A (PRIOR ART)

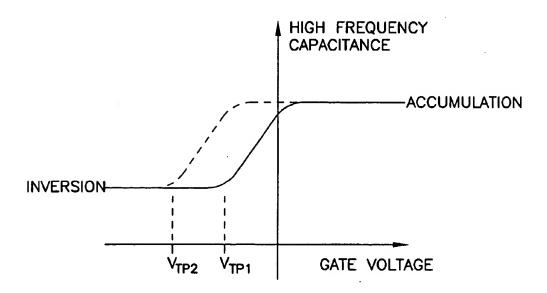


FIG. 2B (PRIOR ART)



SERIAL NO.: 10/042,924

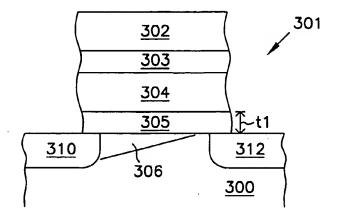


FIG. 3A

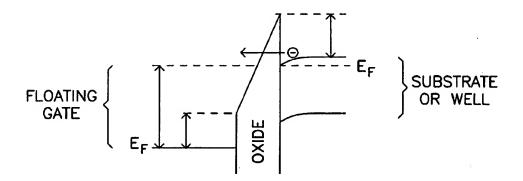


FIG. 3B

FLOATING 
$$\left\{\begin{array}{c} E_{F} \\ E_{F} \\ \hline SOURCE \\ \hline SOURCE \\ \hline REGION \\ \hline FIG. 3C \end{array}\right\}$$



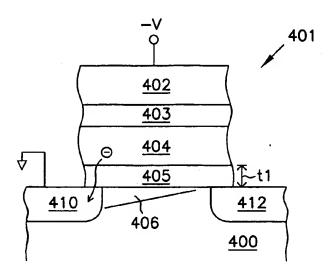


FIG. 4A

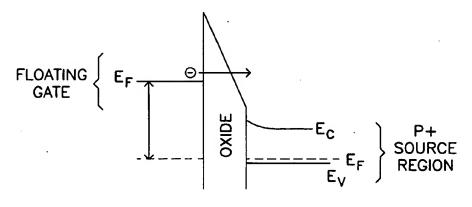


FIG. 4B



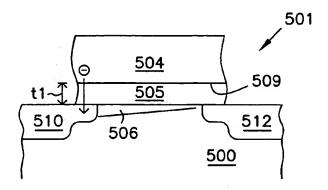


FIG. 5A

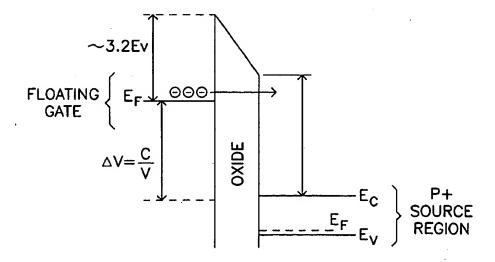
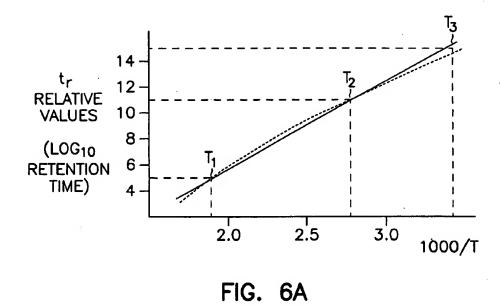


FIG. 5B



SERIAL NO.: 10/042,924

6/10



TH<sub>1</sub> TH<sub>2</sub> TH<sub>3</sub> TH<sub>4</sub>

 $t_r$  , retention time (HR)

10<sup>3</sup> 10<sup>5</sup>

FIG. 6B

10<sup>-3</sup> 10<sup>-1</sup> 10

V<sub>T</sub> (VOLTS)

3.



SERIAL NO.: 10/042,924

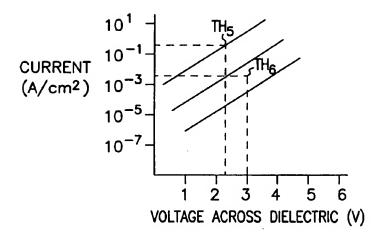


FIG. 7

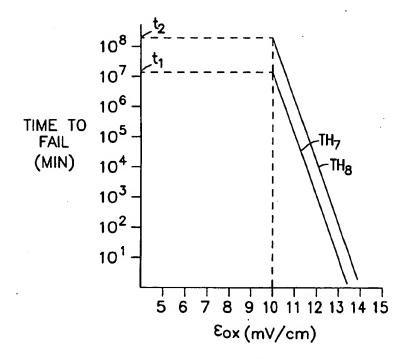


FIG. 8



SERIAL NO.: 10/042,924

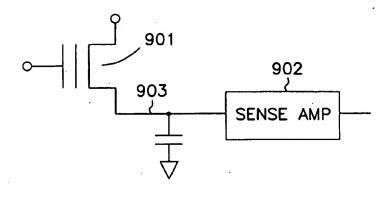
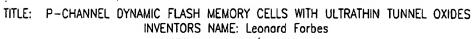


FIG. 9





SERIAL NO.: 10/042,924

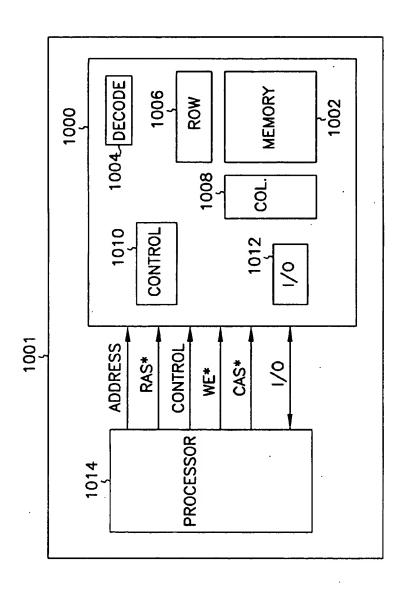


FIG. 10



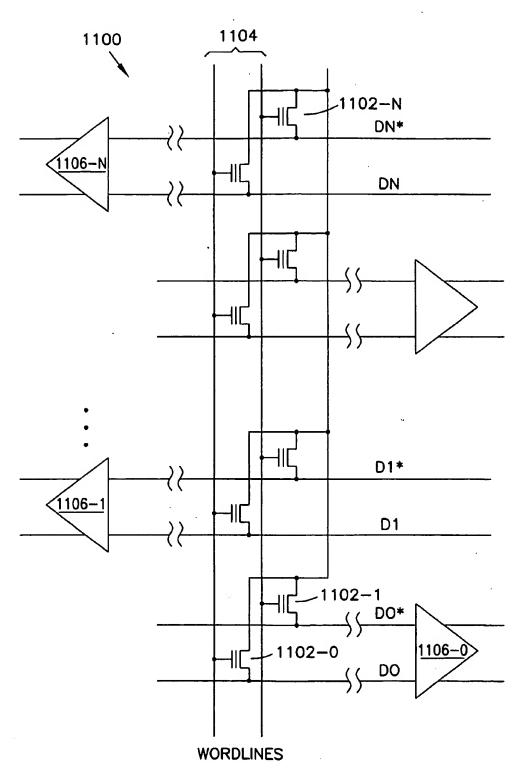


FIG. 11